

What is claimed is:

1. A hydrodynamic bearing system, comprising:
  - a shaft;
  - a bearing sleeve, said bearing sleeve having an inner cylindrical bore and said shaft being inserted into said inner cylindrical bore;
  - a bearing gap formed between said shaft and said bearing sleeve, said bearing gap being filled with a lubricating oil; and
  - a shield enclosing said bearing sleeve,wherein said bearing sleeve further comprises a recess having a sharp edge and wherein said shield is secured to said bearing sleeve by being pressed against said sharp edge of said recess.
2. The hydrodynamic bearing system according to Claim 1 further comprising at least one ring, said ring being configured to be inserted into said recess to press said shield to said sharp edge.
3. The hydrodynamic bearing system according to Claim 1 further comprising at least one bearing element mounted on said shaft, wherein said bearing gap is formed between said bearing sleeve and said bearing element.
4. The hydrodynamic bearing system according to Claim 1 further comprising a lubricating oil reservoir, wherein said shield is secured within said recess of said bearing sleeve at a position that is distanced from said lubricating oil reservoir.

5. The hydrodynamic bearing system according to Claim 1, wherein said shield is secured to said bearing sleeve at a position on said end surface that is distanced from said bearing gap, and wherein said shield does not contact said lubricating oil.

6. The hydrodynamic bearing system according to Claim 2, wherein said ring is a metal ring.

7. The hydrodynamic bearing system according to Claim 6, wherein said shield, said ring and said sharp edge of said recess form a metal cut seal.

8. A spindle motor having a hydrodynamic bearing system, said hydrodynamic bearing system comprising:

a shaft;

a bearing sleeve, said bearing sleeve having an inner cylindrical bore and said shaft being inserted into said inner cylindrical bore;

a bearing gap formed between said shaft and said bearing sleeve, said bearing gap being filled with a lubricating oil; and

a shield enclosing said bearing sleeve,

wherein said bearing sleeve further comprises a recess having a sharp edge and wherein said shield is secured to said bearing sleeve by being pressed against said sharp edge of said recess.

9. The spindle motor according to Claim 8 further comprising at least one ring, said ring being configured to be inserted into said recess to press said shield to said sharp edge.

10. The spindle motor according to Claim 8 further comprising at least one bearing element mounted on said shaft, wherein said bearing gap is formed between said bearing sleeve and said bearing element.

11. The spindle motor according to Claim 8 further comprising a lubricating oil reservoir, wherein said shield is secured within said recess of said bearing sleeve at a position that is distanced from said lubricating oil reservoir.

12. The spindle motor according to Claim 8, wherein said shield is secured to said bearing sleeve at a position on said end surface that is distanced from said bearing gap, and wherein said shield does not contact said lubricating oil.

13. The spindle motor according to Claim 9, wherein said ring is a metal ring.

14. The spindle motor according to Claim 13, wherein said shield, said ring and said sharp edge of said recess form a metal cut seal.

15. A method of manufacturing a hydrodynamic bearing system, comprising the steps of:

mounting a bearing element onto a shaft;

inserting said shaft with said bearing element into a bearing sleeve;

filling a bearing gap with lubricating oil while observing the fill level of said lubricating oil;

placing a shield onto said bearing sleeve such that said a portion of said shield is inserted into a recess of said bearing sleeve; and

securing said shield to said bearing sleeve by pressing said portion of said shield against a sharp edge of said recess.

16. The method of manufacturing a hydrodynamic bearing system according to Claim 15, wherein said step of securing said shield further comprises inserting a ring into said recess such that said ring presses said portion of said shield against said sharp edge of said recess.